

NORTHWEST ARCHITECT

Published By Minnesota Association of Architects

VI #3

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SEE PAGE 3

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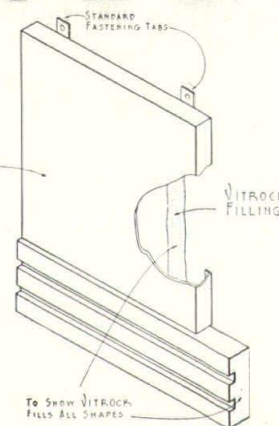
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Northwest Architect

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1942

Contents

Beauty	4
Wm. Gray Purcell	
Effect of Sand on Strength of Plaster....	8
Fluorescent Lighting.....	15
Minnesota Association.....	16
Questionnaire	17
Our Advertisers	10



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HATS OFF TO PENCIL POINTS

WE like the practical way in which Pencil Points is trying to do everything possible for the profession in the present crisis. We have all been filling out questionnaires of various sorts but if you have not done so yet be sure to answer the few questions sent to you by Pencil Points on that Reply Postal. They're going to put a capable and energetic man in Washington to work along with Ned Purves, our A.I.A. representative (who incidentally is doing a good job).

Another thing we have always liked about Pencil Points, while we are about it, is the fact that they refrain from publishing so-called "Small Home Books" and making them available on the newsstands to the general public.

It is one thing to serve the *profession* with the latest and finest architectural and engineering accomplishments for the betterment of the *profession*, but it is another thing to *utilize* the best work and thinking of the architects and engineers and then put it into the hands of industrial leaders, contracting organizations, building owners or anyone who will buy it, with the result that the laymen too often gets the impression that these "reference numbers" are in fact developed for his use and that following the same he himself needs no architect or engineer.

WE MUST PLAN TO WIN THIS WAR

NOTICE!

Architects or architectural firms interested in obtaining commissions for handling defense housing should submit experience, records, and qualifications either to Edmund R. Purves, A.I.A. Washington representative, The Octagon, Washington, D. C., or to W. H. Tusler, 202 Foshay Tower, Minneapolis, for transmittal to Mr. Purves. The qualifications should be set up so that the architectural firms may be grouped as follows:

- A—Those now organized to render complete immediate architectural service on a war housing project.
- B—Those with present potential capacity to render complete architectural service by the addition of engineering and related elements.
- C—Those qualified to render planning, administrative, and supervisory services but not having organizations as indicated under A and B.

See also Page 17.

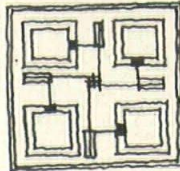
FRONT COVER

The new stainless steel 50th anniversary "Empire State Express," New York Central's world famed name train built by the Edward G. Budd Manufacturing Company of Philadelphia. Locomotive exterior designed by Henry Dreyfuss.

We just can't help by thinking about War all the time. If unable to escape to the woods, perhaps we can escape into our minds, and with a little persistence find there some paths that with use would take us to new pleasures.

BEAUTY

A Colloquy between Ralph Waldo Emerson and w. g. purcell



ANNOUNCER: THIS IS NO NETWORK BUT you are about to sit in with moving ideas lifted out of the common life around him by a man so keen and sensitive that all he said lives with timeless vigor and usefulness. We trust that you will enjoy our program and that you also will be moved to look about at the lessons in common things . . . yes—I know—more Sunday school stuff, but before this WAR is over, we are going to have a lot more respect for what is simple, good and honest, and a lot less use for what is intellectual, stylish and society smart. Democracy is really going to begin to mean something even in architecture.

WE HAVE ONLY FIFTEEN MINUTES ON the air, Mr. Emerson—if you know what we mean—so that we will have to skip the first pages of your script, in which you lay the foundations for beauty in Science—and by that course you come directly to Man himself as the first, last and best exponent of Beauty.

And so, Mr. Emerson, you were about to say? . . .

MR. EMERSON: *"No object really interests us but man, and in man only his superiorities; and, though we are aware of a perfect law in Nature, it has fascination for us only through its relation to him, or, as it is rooted in the mind."*

w.g.p.: We here in 1941 rather had the idea that seventy years ago your New England idea of "beauty" was tied to "prettiness," but we find that you go at once both to principles and to practice.

MR. EMERSON: *"Knowledge of men, knowledge of manners, the power of form, and our sensibility to personal influence, never go out of fashion."*

w.g.p.: It may not surprise you so much that over here in our America, only since 1930, in architecture at any rate, have the inheritors of your America sought the inner significance of people and procedures which lie under the appearance of things.

MR. EMERSON: *"So inveterate is our habit of criticism, that much of our knowledge in this direction belongs to the chap-*

ter of pathology. The crowd in the street oftener furnishes degradations than angels or redeemers: but they all prove the transparency. Every spirit makes its house; and we can give a shrewd guess from the house to the inhabitant."

w.g.p.: You were right then and are still right in 1942. Art and appreciation is over concerned with the garbage dump school of painting, the avoirdupois school of sculpture, and the plumbing shop school of architecture. As you say, pathology is our preoccupation and our brain storm confusions produce nightmares of art which even you could not have imagined.

MR. EMERSON: *"The question of Beauty takes us out of surfaces, to thinking of the foundations of things. Goethe said, 'In art prove your contention.' The beautiful is a manifestation of secret laws of Nature, which, but for this appearance, had been forever concealed from us."*

w.g.p.: How true that is, Laws in action—and at work. Yes, our best thinkers now see it as you do. Beauty as a living continuity, like dance or music, something that has not become frozen into ownable things like paintings, buildings or stamp collections.

MR. EMERSON: *"We ascribe beauty to that which is simple; which has no superfluous parts; which exactly answers its end; which stands related to all things; which is the mean of many extremes. It is the most enduring quality, and the most ascending quality."*

w.g.p.: Beauty "is a quality." We wish you could convince our "modernists." If that which expresses the beauty doesn't happen to be in geographical or physical movement at any given time, you rightly insist that the beholder must at least be moved.

You know, we over here in 1941, have "moving pictures," the cinema. Well, with you over there in 1857 the pictures (such as they were) stayed still and the most sensitive of you were moved. But now the pictures move and most of the audience does nothing and culturally disintegrates.

MR. EMERSON: *"Beyond their sensuous delight, the forms and colors of Nature have a new charm for us in our perception, that not one ornament was added for ornament, but is a sign of some better health, or more excellent action. Elegance of form in bird or beast, or in the human figure, marks some elegance of structure; or beauty is only an invitation from what belongs to us. 'Tis a law of botany that, in plants, the same virtues follow the same forms. It is a rule of largest application, true in a plant, true in a loaf of bread, that, in the construction of any fabric or organism, any real increase of fitness to its end is an increase of beauty."*

w.g.p.: Allow me an aside to our audience, Mr. Emerson. Some of them are a bit dulled with prejudice and others are so smart they have run away from the issue entirely.

Here Mr. Emerson lays down the law of "Form and Function." He doesn't claim to have originated it, any more than Louis Sullivan, fifty years later did ("will do" to you, Mr. Emerson).

The idea is in your air of 1850. Viollet le Duc, and your friend Greenough, sculptor of the U. S. Capital whom you visited in Rome ten years ago—that was 1837 I believe—and others of your time had seen and praised this idea. And of course Plato stated it 2000 years before.

MR. EMERSON: *"The lesson taught by the study of Greek and of Gothic art, of antique and of pre-Raphaelite painting, was worth all the research—namely, that all beauty must be organic; that outside embellishment is deformity."*

w.g.p.: There you have it, gentlemen, "organic," a statement as new as the latest exhibition at our "Modern" gallery.

We rather forget, Mr. Emerson, that all you did and saw was also very *modern* to you, and of course by that index was necessarily neither virtuous nor subversive—nor is it otherwise today.

THE PHOTOGRAPH ABOVE is printed in honor of a distinguished architect and man of quality in mind and spirit. His name is all but forgotten, although his prize winning solution of the plan for the capital city at Canberra, Australia, in 1913 opened the doors to the new world of Regional City Planning with a project which will not soon be surpassed. One hundred and thirty of the most famous architects from all nations competed. Only Griffin and Saarinen offered a program for a living city—all the rest were dead patterns—graphic designs of fabulous unrealities. I could write at length on this man and his work. He died in India in 1938 while directing a World Exposition for the Maharajah of Nepal concerning which not a line was published in any of our Architectural Journals. But I will leave this subject with a bit of grim humor. Of the one hundred and thirty competitors for the Canberra City Plan only Griffin, Saarinen and dear old Albert Kelsey of Philadelphia were alert enough to find the significant issues in the program data supplied to all, and one hundred and twenty-seven of these cities, had they been built, would have been inundated under fifteen feet of water every fall! Architectural Follies of 1913! All hail, l'école, Prix de Rome, and the 6B pencil era.

But where were our architects of 1903, of 1912, of 1921, of 1930? These sound thoughts of yours were available to them all during that time. With amazement I used to listen to the soft rules of my college professors that made no sense, and their soft black pencils that made meaningless patterns—"but what are these columns for—why these stone vases with no plants—cornices not at the roof edge with no water to carry, why these vast plazas between buildings of common use?" I "was sort of a queer fellow—a socialist or something" (radical and communist were not then invented). Well even the Ecole de Beaux Arts, whom your contemporary Viollet le Duc distrusted in your day,

Mr. Emerson, as much as we do today, are all saying "organic" now—and honest construction is no longer "Red" to them—so curiously does the collective reactionary mind reverse itself to try ineffectually to accommodate itself to inexorable life and growth.

MR. EMERSON: *"It is the adjustment of the size and of the joining of the sockets of the skeleton, that gives grace of outline and the finer grace of movement. The cat and the*

deer cannot move or sit inelegantly. The dancing-master can never teach a badly built man to walk well. The tint of the flower proceeds from its root, and the lusters of the sea-shell begin with its existence. Hence our taste in building rejects paint, and all shifts, and shows the original grain of the wood: refuses pilasters and columns that support nothing, and allows the real supporters of the house honestly to show themselves. Every necessary or organic action pleases the beholder. A man leading a horse to water, a farmer sowing seed, the labors of hay-makers in the field, the carpenter building a ship, the smith at his forge, or, whatever useful labor, is becoming to the wise eye. But if it is done to be seen, it is mean. How beautiful are the ships on the sea!"

w.g.p.: You have here provided the text for the whole art world since Ruskin. He was 38 when you were last in England and you must have



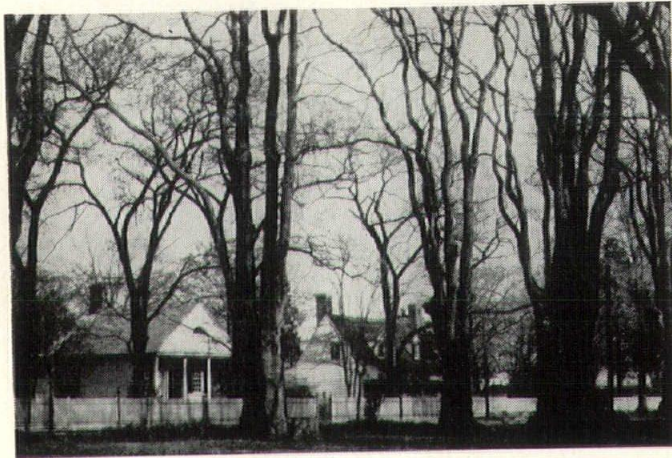
"If a man can build a plain cottage with such symmetry as to make all the fine palaces look cheap and vulgar. . . ."

read his stirring words, for people had then been reading and talking about "The Seven Lamps of Architecture" for eight years. Writers and novelists were the first to see this organic concept of life and art, then the really creative masters of painting, sculpture, drama and the dance. Last to wake up about 1930 were our architects and already they are busy cataloging the new forms and patterns and putting them back to sleep in convenient files. Will this reaction build a new bastion for a new line of aristocrats in art—or can our common men fight the system and keep architecture alive? The battle is on again.

MR. EMERSON: *"Nothing interests us which is stark or bounded but only what streams with life, what is in act or endeavor to reach somewhat beyond. The pleasure a palace or a temple gives the eye, is, that an order and method has been communicated to stones, so that they speak and geometrize, become tender or sublime with expression. Beauty is the moment of transition, as if the form were just ready to flow into other forms."*

w.g.p.: Mr. Emerson, you sitting there in peaceful Concord, looking out the window to see Henry Thoreau sauntering by with a pocketful of his new made pencils, you just have no idea of the speed and everlasting movement of this restless, unsatisfied life we live here. In all America there were only 25 million of you—there are now 125 million of us here—and the extra hundred million are on the jump every

Pre-Rockefeller Williamsburg, Virginia



Beauty a Function of Time

These board cottages of 1730 would seem poor enough if you came across them on the bare lots of a new subdivision such as this Virginia colonial village was two hundred years ago. But men and events of great portent have grown like the old trees to make an "architecture" not to be captured on a drawing board, nor made real within a pageant however substantial and engaging its elaborate scenic sets.

Frank Lloyd Wright, Architect, 1898



Beauty a Function of Feeling

In this modern dwelling of forty years ago the organized enclosure and construction are honest; but, unlike the applique approach of our "moderne" constructivists, expression is given to the spirit of man in those relations where his better nature is freed from business strife and passing social style forms.

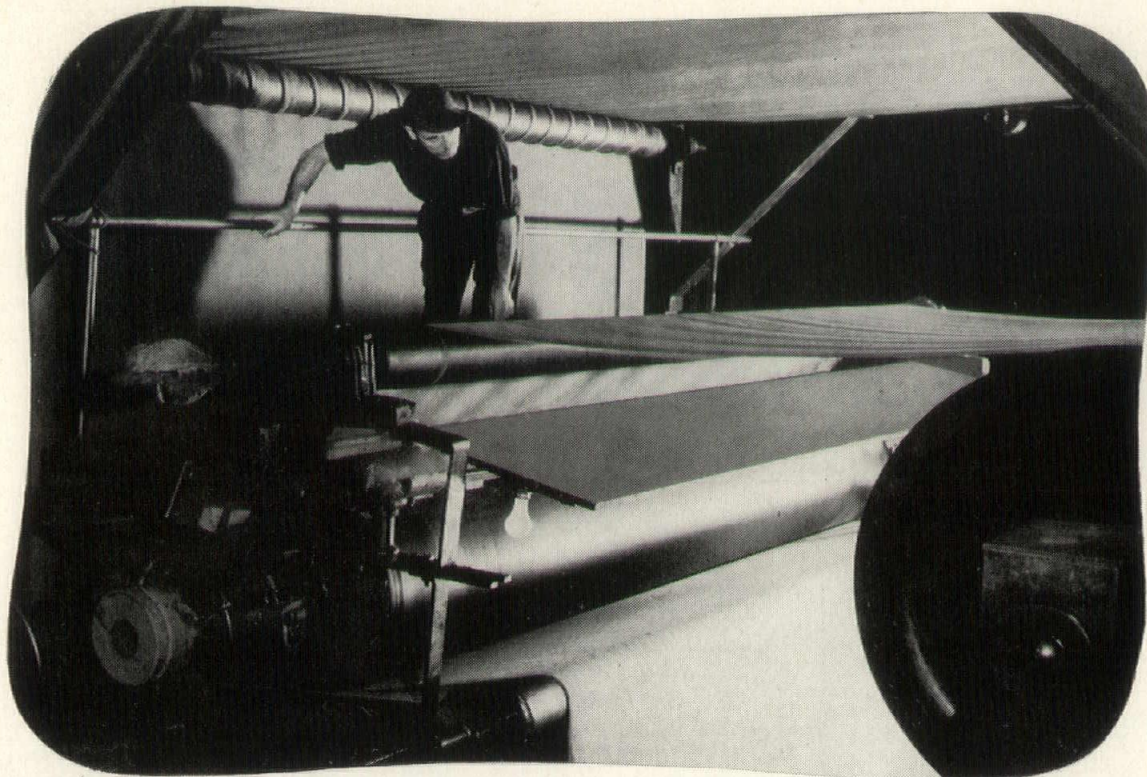
minute. Yes, that may be beauty too—as you say, but too far out of balance—the time for a recovery is overdue.

MR. EMERSON: *"To this streaming or flowing belongs the beauty that all circular movement has; as, the circulation of waters, the circulation of the blood, the periodical motion of planets, the annual wave of vegetation, the action and reaction of Nature: and, if we follow it out, this demand in our thought for an ever-onward action, is the argument for the immortality."*

w.g.p.: And our "streamline" appearance in design is here anticipated by your living prophetic words. The trouble now is that the "streamline" idea so quickly hardened into another Beaux Arts cliché and everything streams quite regardless of whether there is any element in the object which wants to say just that.

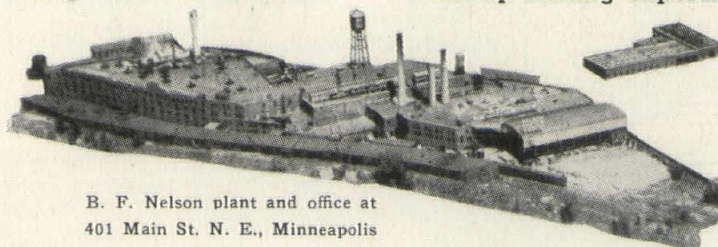
We have got down into the atom and made photographs of its microcosmic systems. It's all very beautiful in the ways you knew it would be and very stimulating to creative artists. As you said above, beauty is "an invitation from what belongs to us"—it is indeed a very part of our being.

(Continued on Page 13)



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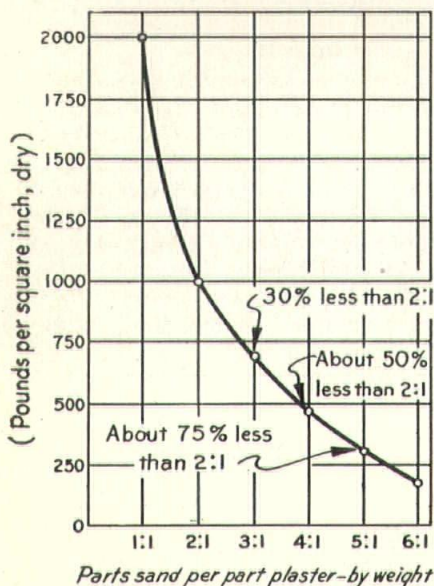
Effect of Sand on Strength of Plaster



To make the scratch test, plaster was applied 1/2-inch thick on gypsum lath and permitted to dry in the room. When dry, a steel point was drawn across the surface of the panel at a uniform rate of speed, the point being loaded with a 22-pound weight. The point was

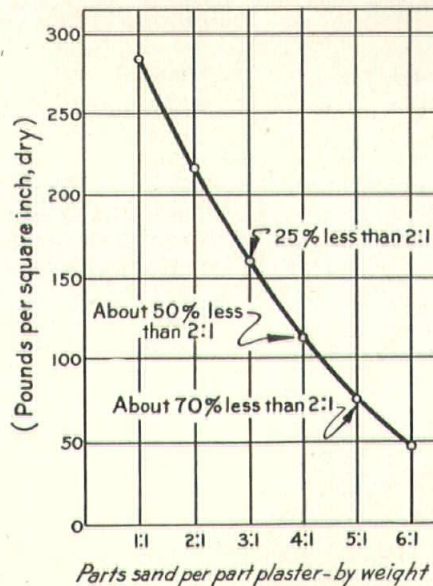
made of tool steel, 3/16"x1/2"x5", ground to a V point. The material "plowed up" by the point was collected and weighed, and the results were given as weight of material lost per inch of length of the scratch. The chart at the right shows these results. The effect of this test on mixes of various pro-

portions is shown by this series of photographs. The illustration at the extreme left above was sanded one-to-one; top center, two-to-one; upper right, three-to-one; at left below, four-to-one; at lower center, five-to-one; and lower right, six-to-one.



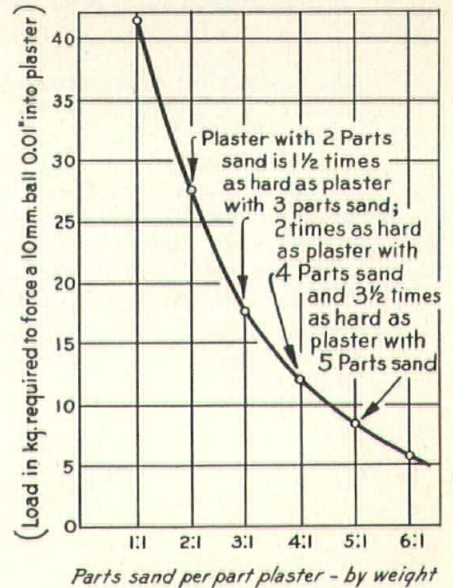
COMPRESSIVE STRENGTH

The higher the compressive strength, the better the plaster. This chart shows that increasing the sand content from two to three parts, by weight, decreases compressive strength approximately 30%. Increasing sand content to four parts decreases compressive strength approximately 50%.



TENSILE STRENGTH

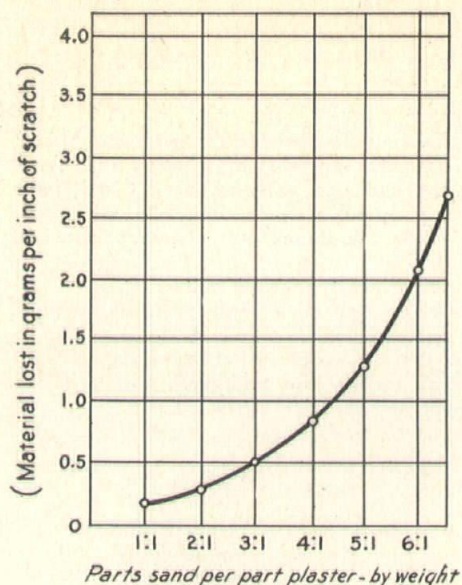
High tensile strength is another requirement of good plaster. Over-sanding cuts tensile strength, as the above chart shows. Tensile strength of plaster decreases 25% by increasing sand content from two to three parts; 50% by increasing sand to four parts, and 70% by increasing to five.



HARDNESS TEST

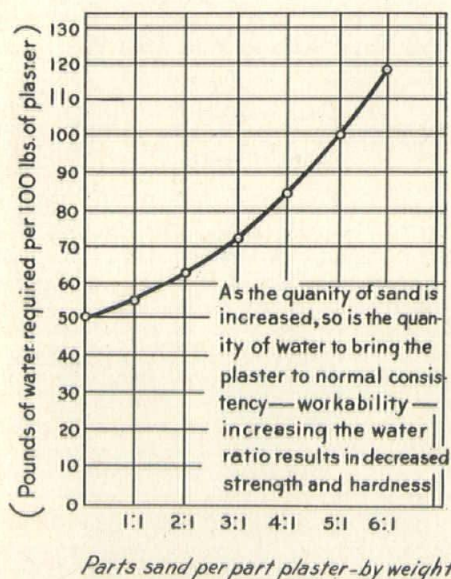
If plaster is to continue as first choice for walls, it must be hard to withstand abuse. The Monotron hardness test shows that plaster with two parts of sand is 1 1/2 times as hard as plaster with three parts of sand; twice as hard as with four parts; and 3 1/2 times as hard as with five parts.

Illustrations Courtesy Gypsum Association



SCRATCH TEST

To determine the quality of a plaster wall, scratch it with a sharp point. A laboratory test to compare qualities of plaster showed the depth and width of the scratch, or material "plowed up" was much greater with high sand content. This chart shows comparison of different proportions. Photographs at left show test specimens.



PLASTER CONSISTENCY-WATER RATIO

As the sand content of plaster is increased, the amount of water per 100 pounds of plaster must also be increased to get workability. This chart, prepared from laboratory tests, shows that as the water ratio to gypsum is increased, the strength and hardness of the plaster are decreased.

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MORE THAN EVER
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Efficient!**



Important action in today's all-out war is being won over the architect's drawing board!

Now more than ever before, homes are designed and engineered for efficiency. Emphasis is placed on insulation for its known value in conserving fuel—in providing year-round comfort at low cost.

Carney insulated homes show fuel savings up to 40%. Carney Rockwool Batts are essential, for homes need insulation as efficient, as available and as high in quality as Carney Rockwool Batts.

Carney trucks deliver to the job on 24-hour notice. Carney Rockwool can be ordered in mixed truck loads of Batts or Pouring Wool, Carney Cement for Masonry and Carney Natural Cement for Blended Concrete construction.

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OUR ADVERTISERS . . .

Number one of a series of articles which will go "backstage" with our advertisers, large and small.

Carney Rockwool Company Mankato, Minnesota

By THE COMPANY

The Carney Company of Mankato is one of Minnesota's oldest businesses. It owns in fee 1,225 acres of the nation's finest quarries. Sixty years ago these quarries were operated for the purpose of supplying rock for the manufacture of Natural Cement and in 1904 H. E. Carney, Sr., developed a masonry cement which for years was the only such special cement on the market.

Five years ago, W. R. Oglesby, Chief Chemist in charge of the laboratories, began research work with rock from the various Carney ledges. His task was to determine the chemical properties of these rocks as raw material for the manufacture of a high quality rockwool.

Different ledges of rock have different chemical characteristics. The first ledge of the Carney quarries was never used in the manufacture of cement. Cement for masonry and natural cement were made from the lower ledges.

After years of work Mr. Oglesby developed a combination of rock, which, while unsuited to the making of cement, contained the perfect balance of silica and the oxides of aluminum, iron, calcium and magnesium to make a rock wool that chemically is identical with nationally known brands of the famed Indiana limestone district—and physically a superior wool, whiter in color, of smaller fiber diameter, and with a minimum of shot.

On a morning in June, 1939, the first Carney Rockwool was produced in a Pilot Plant at the Carney Cement Mill. The Pilot Plant was constructed and the first wool from the Pilot Plant was blown under the supervision of Company chemists, W. R. Oglesby and Wm. C. Duane, and outside Rockwool specialists. The results were perfectly satisfactory and immediately Carney Rockwool Company was incorporated for \$150,000; several acres of ground were purchased and work started in July on the construction of a modern one- and two-story steel and cement block Rockwool plant. The plant was originally constructed large enough to house three cupolas but in the beginning only one was built. At the present time a second unit is nearly completed. Each of these two cupolas has a 52" inside diameter and produce between sixteen and seventeen tons of loose wool each per day. A 100 horse stoker-fed boiler supplies the steam for blowing the molten rock into wool, each cupola using two streams.

The original cupola was equipped with an oven capable of heating up to 500 degrees Fahrenheit and automatic batt equipment for the fabrication of all sizes of felted mineral wool.

One of the most important features of this company is its Laboratory and technical staff, men experienced with the chemical end of the Rockwool business since the inception of rockwool in this territory. Control and uniformity of the raw material and manufacture of rockwool is essential to a good wool and economical production.

J. R. Thoenen is Supervising Engineer, Mining Section of the United States Bureau of Mines. Writing in the February, 1939, issue of *Mining and Metallurgy*, he says:

"In five years rockwool has grown to a 30-million dollar industry from one, the output of which was valued in 1933 at \$1,700,000. Look at the rate of growth:

1933 Total production.....	\$ 1,700,000.00
1935 Total production.....	5,571,469.00
1936 Total production.....	15,000,000.00
1938 Total production.....	30,000,000.00

"The rockwool industry will prosper with increased building activity for two-thirds of the rockwool production is used for

building insulation and to assist in fire retarding in both old and new houses. Here is an industry that is only beginning to have a present and one with an almost certain important future."

From wide research these facts about rockwool have been established:

1. Rockwool has high thermal efficiency.
2. Rockwool has chemical and physical stability, i.e., it stays where put and does not deteriorate.
3. Rockwool is not subject to rot or decay.
4. Rockwool is clean and sanitary.
5. Rockwool has no odor.
6. Rockwool is noncombustible, therefore it is fireproof. This tends to reduce insurance rates.
7. Rockwool is moisture resistant and repellant. This quality is of utmost importance, not only in preventing accumulation of moisture within walls, with accompanying dampness and discomfort, but in maintaining actual insulating value of the material itself. Its insulating properties do not fluctuate with changing weather conditions.
8. Rockwool is reasonable in cost—provides the most effective insulation for the dollar.
9. Rockwool is highly adaptable to the building structure either in batts, quilts or loose fill for blowing into old houses.
10. Rockwool is vermin proof.
11. Rockwool is an excellent accoustical insulation material. The Broadcasting Studios of Radio City are insulated with Rockwool.

Three and five-eighths inches of Rockwool is roughly equivalent to:

15 inches of Solid Wood
60 inches of Brick Work
67 inches of Hollow Tile
100 inches of Concrete
117 inches of Stone.

We Must Plan to Win This War!

CELOTEX TRAINING SCHOOL OUTSTANDING SUCCESS

According to George P. Little, Manager of the Acoustical Department of The Celotex Corporation, the training school for acoustical distributors' fieldmen held at the Lake Shore Club, Chicago, recently, was the most intensive acoustical training program sponsored by Celotex.

Twenty-two men from all parts of the United States and Canada came into Chicago to go through a comprehensive course in sound conditioning under the direction of the Engineering, Research and Acoustical Sales Department. The course covered all practical phases of architectural acoustics, noise quieting and construction pertaining to sound conditioning.

Those men who attained a satisfactory rating were awarded a certificate of proficiency in sound conditioning. Similar schools have been held in former years by Celotex but this was the first wherein the course of study and subsequent examinations justified such an award, in the opinions of the instructors.

Hale J. Sabine, Chief Acoustical Engineer, Robert Lindahl, Research Engineer, and members of the Acoustical Sales Department prepared the course and delivered the instruction.

"This was anything but a usual sales school," said Mr. Little. "Emphasis was placed upon technical instruction in order to equip these men to handle successfully the many problems in sound conditioning arising from industry's drive for utmost employe efficiency. The present-day forced draft pace in all manufacturing plants and business offices places increased importance upon the losses occasioned by excessive noise. Fieldmen must know how to obtain highest reduction of these losses through effective sound conditioning."

MATERIALS "BREAK DOWN"

Following is a breakdown of the percentage of various materials entering into school building construction and is based on accurate government statistics covering some 500 completed buildings on which actual costs of materials were known. The percentages given are percentage of cost of materials only and do not include labor at the site.

Materials	Per Cent of total
1. Brick: Common, face and fire.....	9.30
2. Heating equipment: Furnaces, boiler, etc.....	8.60
3. Lumber: Rough and dimensioned, plywood, wall board, etc.	6.90
4. Millwork: Doors, windows, frames, trim, etc...	6.40
5. Electric equipment and supplies: Motors, wiring, conduit, fixtures, etc.....	5.83
6. Cement: Regular and Portland.....	5.77
7. Structural steel: Columns, girders, piling, tanks, etc.	5.70
8. Cut stone: Limestone, marble, granite, slate, etc.	5.20
9. Plumbing: Lead pipe, fittings, fixtures, etc....	4.60
10. Gravel, crushed stone and aggregate: Slag, cinder	4.00
11. Plaster: Lime, hair, gypsum, etc.....	3.92
12. Tile and ceramics: Terra cotta, ceramic, roofing	3.88
13. Sheet metal: Hollow metal, lath, gutters, ducts, etc.	3.80
14. Ornamental and miscellaneous iron: Railings, sash, stairs, etc.....	3.30
15. Asphalt products: Tar, pitch, creosote, paper..	2.11
16. Reinforcing steel: Bars, rods, wire mesh.....	2.09
17. Hardware: Nails, screws, locks, knobs, catches..	1.75
18. Sand for concrete, mortar and plaster.....	1.65
19. Composition flooring: Linoleum, terrazzo, tile..	1.50
20. Paint and varnish: Linseed oil, lead, turps, shellac, putty, etc.....	1.40
21. Machinery: Engines, elevators, blowers, fans, etc.	1.20
22. W. I. pipe and fittings: Water and gas service connections91
23. Glass: Window, door, plate, skylight.....	.89
24. Tools and plant: Contractors equipment.....	.73
25. C. I. pipe and fittings: Waste pipe and fittings..	.67
26. Pumps32
27. Waterproofing: Integral, membrane, etc.....	.28
28. Vitrified pipe and fittings.....	.20
29. Wire products: Fence, screens, etc.....	.14
30. Fire hydrants06
31. Miscellaneous	6.90
Total	100.00

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"It seems to me that at this time when many of us are out of a job, or soon will be, at this time when our communities and our nation are in need of the personal support of every citizen—at this time, when we have the time, and have every incentive as well—this is the time to do Red Cross work, to take a hand in good government, in clean politics, in social betterment, slum clearance, in church work, in education. I believe that right now, if we want our profession to have its indispensable place through the uncertain days that are coming—if we want our profession to have its place when peace comes again—and if we want individually to take our part when there is so much dire need—we have got to make use of every opportunity to gain and to hold the respect and the confidence of the public by public service."

— William Orr Ludlow.

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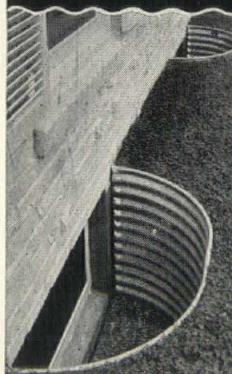
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SORRY TO HAVE MET YOU MR. METRIC

Dear Hal:

Your editorial on the metric system in the latest **NORTHWEST ARCHITECT** prompts the following thoughts:

I agree that at the present time it would have been of great value if all armaments were calibrated on the metric system. But as for adopting it as the ultimate university system of measurement—well, I have a counter proposal that has the combined advantages of the metric and English systems. Only the French could have devised the metric system; they have a logic of mind that is sometimes divorced from plain common sense. Hence they invented (I am guessing) the decimal point, a triumph of logic, but they based it on a system of 10s, because the human race had started counting on its fingers and had never thought to add a couple of imaginary digits. But the English, and I think the human race everywhere, in the dim past found 10 to be an inconvenient figure and had developed 12, which was divisible by 2, 3, 4, and 6, which was much more convenient in the commerce and economy of life. It happens that some mathematician has worked out a system that overcomes that lack of flexibility in the decimal (10) system but retains the simplicity of the decimal point. It is called the duodecimal (12) system.

It would consist of twelve digits—1, 2, 3, 4, 5, 6, 7, 8, 9, a, b, 0. "a" and "b" would of course have to be given names and symbols. If that system were in use, we would find that $\frac{1}{3}$ would be .4 instead of .3333 . . . In dimensioning our plans, 16'4" could be

written 16.4' or 164". And instead of $\frac{1}{3}$, $\frac{1}{6}$, $\frac{1}{7}$, $\frac{1}{9}$ being indefinite decimals, only $\frac{1}{5}$, $\frac{1}{7}$, and $\frac{1}{11}$ would be indefinite under the duodecimal system. In all the powers, that would reduce by 25% the number of indeterminate fractions. And at the same time we could still buy four eggs ($\frac{1}{3}$ dozen), if we were so poor, without complicated mathematics. It would introduce a radical change in our mathematics, to be sure, but one as easy as decimals once we got used to a-teen and b-teen, and twenty-b, and 10a. (one-hundred and a).

We would still have to decide on the absolute length of unity, in measurements, on the unit of gravitational pull in weight, etc. I believe that the metric system is based on the length of a certain sound wave. Perhaps that unit would be still the best, or perhaps there is some other even more absolute base.

It would be a big change, but so would converting the English speaking world (which really is dominant, commercially) to the French metric system. I wish I knew where to refer you to for a better exposition of the duodecimal system, but I can't remember where I read about it. It's an interesting idea and you might enjoy looking up more information on it, if you find time.

Sincerely yours,

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(Continued from Page 6)

MR. EMERSON: "Beautiful as is the symmetry of any form, if the form can move, we seek a more excellent symmetry. The interruption of equilibrium stimulates the eye to desire the restoration of symmetry, and to watch the steps through which it is attained. This is the charm of running water, sea waves, the flight of birds and the locomotion of animals. This is the theory of dancing, to recover continually in changes the lost equilibrium, not by abrupt and angular but by gradual and curving movements."

w.g.p.: We are glad you said it so well, Mr. Emerson, and it's everlastingly true, but we are having a hard time just now to get all these eggs-in-one-basket designers to believe that the cleverly engineered flowers of the roadside are also colorful or plush or cleanly sweet, that all trees don't wave their bare roots against a sky which is still blue just as it was in your day and not nickle plated as the drawing board aesthetes would have us believe.

MR. EMERSON: "Veracity first of all, and forever. Rien de beau que le vrai. 'Nothing in beauty except the truth.' In all design, art lies in making your object prominent, but there is a prior art in choosing objects that are prominent. The fine arts have nothing casual, but spring from the instincts of the nations that created them."

w.g.p.: There is indeed a world of material to be carefully thought about in these few simple sentences of yours. There is a lot of wholesome thinking now going on about these matters but new styles and fashions are rapidly being organized and cataloged in order that our prominent, successful practitioners and the leaders in our art of Architecture may not be continually embarrassed with the need of thinking, but can conveniently refer to what is "acceptable," what "they say" and so on.

MR. EMERSON: "Beauty rides on a lion. Beauty rests on necessities. The line of beauty is the result of perfect economy. The cell of the bee is built at that angle which gives the most strength, with the least wax; the bone or the quill of the bird gives the most alar strength, with the least weight. 'It is the purgation of superfluities,' said Michelangelo. There is not a particle to spare in natural structures. There is a compelling reason in the uses of the plant, for every novelty of color or form: and our art saves material, by more skillful arrangement, and reaches beauty by taking every superfluous ounce that can be spared from a wall, and keeping all its strength in the poetry of columns."

w.g.p.: Mr. Emerson, you'd be surprised at what happened to this good idea of yours along about 1935. Dollar economy had been pressing upon us so hard for five years that the harassed architects seized upon this "economy of nature" as the sole god of the building art. The result has been an epidemic of plain speaking with

architecture in which the architectural viscera must be hung on the face of the building apparently to reassure a long suffering public, who must now accustom itself to a new kind of falsification.

The new aristocracy in architecture are much taken up just now with what is called the International style. They have failed to learn that when anything can be identified as a "style" it is already dead. But these constructivists who follow a philosophy that would reduce birch bark — elm bark — sequoia bark, yellow pine bark, eucalyptus bark to just a sort of "bark-style" — are exalting the idea that Japs and Irish and Arabs and Finns and Moors have nothing in their minds and hearts worth think-about, but all nations must express themselves in the forms of a New York night club. A few of us still think that the instincts of nations can hardly be ignored — not since March 5, 1933! but we still hope that the more commendable instincts will prevail and decent nations find opportunity to enjoy their better natures.

MR. EMERSON: "The felicities of design in art, or in works of Nature, are shadows or forerunners of that beauty which reaches its perfection in the human form. All men are its lovers. Wherever it goes, it creates joy and hilarity, and everything is permitted to it. It reaches its height in woman."

w.g.p.: All comes back to the Man again in some of his aspects, physical, mental, moral. The physical has had plenty of attention these past twenty years, or perhaps better said, the muscular has had more than an even share.

Architecture and its beauty does have its mental appeal, that too is being thought about everywhere — and also its psychological implications in some of their ever expanding concepts. But that architecture has its morals is not given much attention notwithstanding some marvelous words written while you, Mr. Emerson, still lived. Those "Seven Lamps of Architecture" by John Ruskin, real sermons they are, as you know, but rather laughed at as "Sunday school" stuff in this unbelieving world of ours.

MR. EMERSON: "If a man can build a plain cottage with such symmetry, as to make all the fine palaces look cheap and vulgar; can take such advantage of Nature, that all her powers serve him; making use of geometry, instead of expense; tapping a mountain for his water-jet; causing the sun and moon to seem only the decorations of his estate; this is still the legitimate dominion of beauty."

w.g.p.: You will recall, Mr. Emerson, that about this time you wrote a poem to introduce your essay, "Art."

"Give to barrows, trays and pans
Grace and glimmer of romance
Bring the moonlight into noon
Hid in gleaming piles of stone . . ."

and so on.

This seems pretty obvious to us now because along about 1900 a man named Elbert Hubbard

lead a national evangelistical movement for beauty in common things. It must have seemed a bit unbelievable to you, as it does to us, that your friend the famous writer Dr. Oliver Wendell Holmes thought you were "going entirely too far" in proposing to make wheelbarrows beautiful. Well, Sears Roebuck are doing just that today at a good profit. But then Dr. Holmes' best contribution to America is a son who became our greatest jurist—beauty in law—and to it he brought a lot of good fun and humanity to boot.

MR. EMERSON: *"All high beauty has a moral element in it, and I find the antique sculpture as ethical as Marcus Aurelius Antonius; and the beauty ever in proportion to the depth of thought."*

Thus there is a climbing scale of culture, from the first agreeable sensation which a sparkling gem or a scarlet stain affords the eye, up through fair outlines and details of the landscape, features of the human face and form, signs and tokens of thought and character in manners, up to the ineffable mysteries of the intellect.

Wherever we begin, thither our steps tend: an ascent from the joy of a horse in his trappings, up to the perception of Newton, that the globe on which we ride is only a larger apple falling from a larger tree; up to the perception of Plato, that globe and universe are rude and early expressions of an all dissolving Unity—the first stair on the scale to the temple of the Mind."

No box top need be sent!

If you have stayed with me this far, or even just taken a skip look at the end here on your way to the advertisements, I'd like to say: "If you will send me a self-addressed envelope and tell me how you like my stuff and what you'd like to have me write about (1½c stamp is enough), I'll be happy to send you a little reprint, complete, of Emerson's "Essay on Beauty." You will like it—will want to read all that this interesting and humane man has written.—William Gray Purcell, Westwinds, Route 1, Box 637, Pasadena, Calif.

Then I said, "I covet truth;
Beauty is unripe childhood's cheat;
I leave it behind with the games of youth" . . .
As I spoke, beneath my feet
The ground-pine curled its pretty wreath,
Running over the club-moss burrs;
I inhaled the violet's breath;
Around me stood the oaks and firs;
Pine-cones and acorns lay on the ground;
Over me soared the eternal sky,
Full of light and of deity;
Again I saw, again I heard,
The rolling river, the morning bird,—
Beauty through my senses stole;
I yielded myself to the perfect whole.

R. W. E.

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FLUORESCENT LIGHTING

I suggest that through the fluorescent lamp new building illumination has become definitely the responsibility and the opportunity of the architect in a sense never before possible. The adaptable, portable, attachable, fixture still has its natural field in both old and new buildings, but the built-in fixture now becomes an integral part of the original design, and I believe the responsibility for its successful use lies almost solely with the architect. He must see to it that the fixtures he specifies are made to such dimensional tolerances that they will fit when delivered to the job. It follows from this that the fixture manufacturer must conform to such dimensional standards for his fixtures of the built-in type, as are already common-place to the manufacturers of heating and plumbing fixtures, and prefabricated window frames, and should provide similar roughing-in specifications. A good start in this direction has already been made, and I believe it is up to the architect to demand that the practice be universal.

I suggest that the method of illumination should be chosen early in the building design and its installation details should be as carefully anticipated as those of the heating and plumbing. It would seem that the architect may properly look to the fixture manufacturer for information not only as to the mechanical dimensions of fixtures, but for information as to the amount and the distribution of the light supplied from such fixtures. Any fixture so profoundly modifies the characteristics of the light source itself as to render the information supplied by the lamp manufacturer of only the most general value.

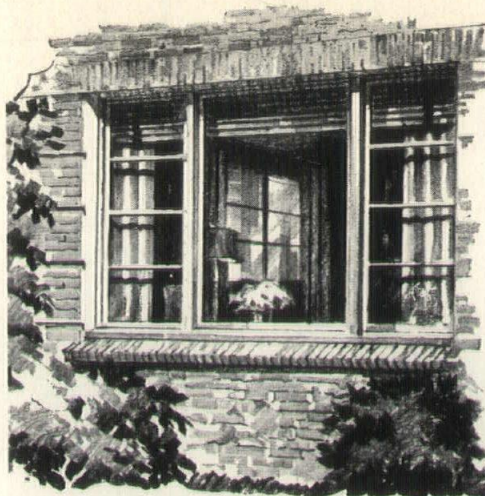
Unsuccessful lighting experience is all too easily obtained at firsthand, but hard to secure by admission from others. I believe it goes without saying that to do creative work in the general strategy of the design of a building or a room the architect must have so completely absorbed the basic characteristics of his media that he thinks in terms of steel, concrete and wood, of plaster, paint and color, as casually as he uses paper, pencils and crayons to make a sketch. I believe the time has come for the architect to similarly take on the creative use of light and lighting effects.

—Dr. L. J. Buttolph, Physicist, Nela Park, Cleveland
Dr. Buttolph is research physicist for General Electric Company.

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Forest Products Laboratory, United States Forest Service, says: "There are two ways in which fungi can be kept from growing in wood: (1) Poison the wood by injecting a preservative into it; surface treatment is not sufficient and (2) deprive the decay fungi of water. Wood kept dry is a permanent building material.

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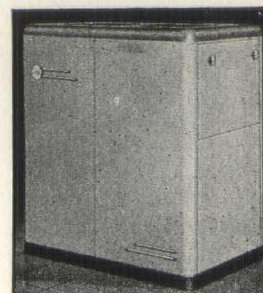
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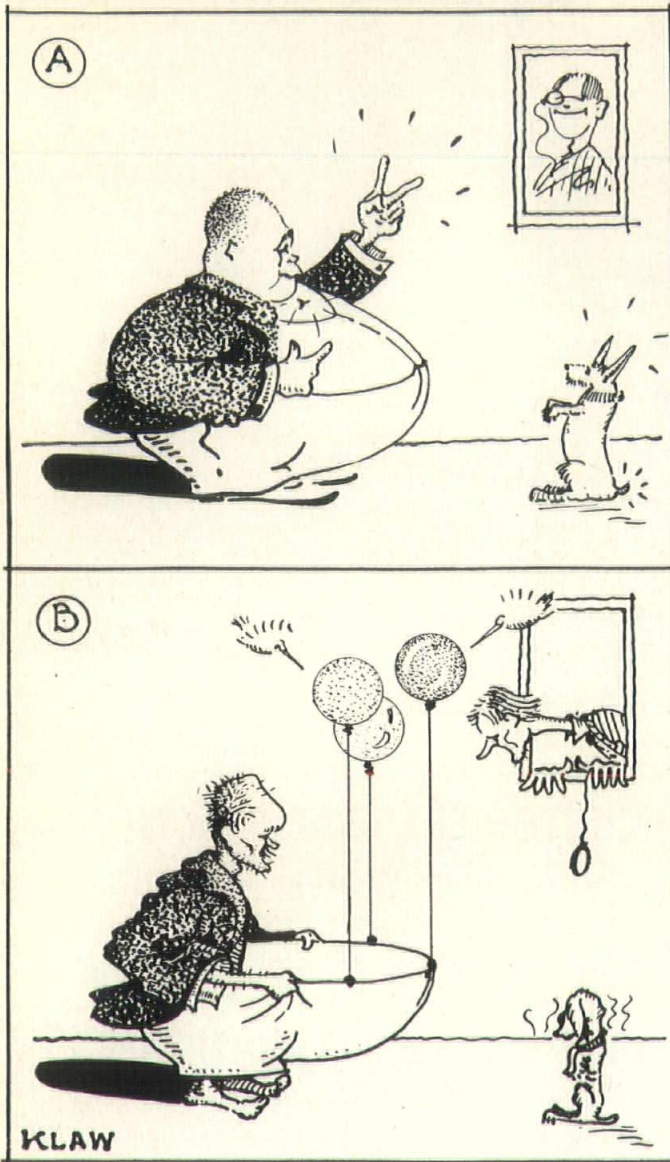
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News OF THE MINNESOTA ASSOCIATION OF ARCHITECTS



PRIORITIES

Cartoon A—"Archi-Tect" Large, plump, prosperous with his equally well fed dog making the "V" sign (dog ears).

Cartoon B—Archi after priorities are and have taken their toll. Archi has starved away so that his pants and suit don't fit any more and his dog is also starved.

Michigan Architects Push Unification

The Michigan Society of Architects working in co-operation with the A.I.A. Chapters in the state are developing what appears destined to be a highly workable program of unification of the profession and which will probably be the guide for national unification so sorely needed.

The Unification Committee of the Minnesota Association of Architects with Roy Childs Jones as chairman is developing for presentation to Minnesota architects a program which will bring together all elements of the profession, correlate the programs of the various existing organizations and gather the potential power of all groups into one concentrated force working for the advancement of all.

Architect Bowlers Lead League in Three Game Total

The architects' team of the Minneapolis Builders' Exchange Bowling League continues to hold the "High Team Total" with 892 and is in third place with "High Three Game Total" of 2,411.

The league, which was started this winter, consists of 10 teams and bowls every Wednesday evening at 7:00 p.m. at Melody Lanes, 53rd and Lyndale South, Minneapolis.

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Roger Babson in a Current Circular to *His Clients* pays Tribute to Architects and the Value of Their Services to *Their Clients*, Thus:

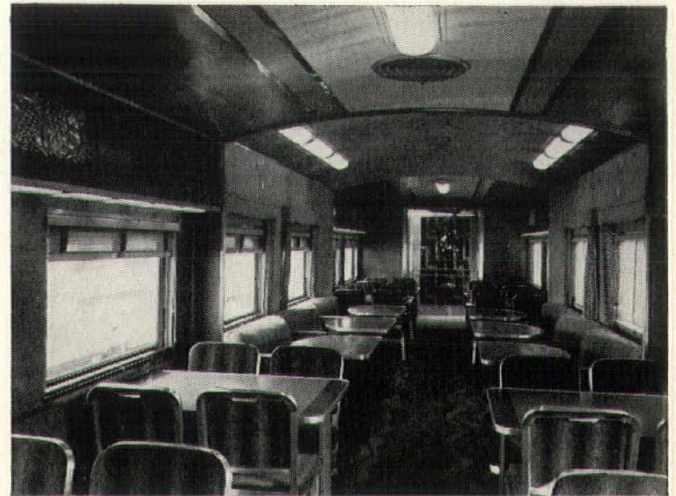
"Do you worry? . . . Are you often wondering what to do? . . . bewildered? . . . perplexed? . . .

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"He employs an architect to worry about building his plant and then gets a superintendent to worry about running it . . . and a sales manager to worry about selling the output. His dentist worries about his teeth, his lawyer about his will and his golf-pro about his slice. He lets his wife worry about the house affairs while the schoolteachers worry about his children.

"All in all, the more people he can get to worry about his problems, the more successful he will be.

"Yes, it pays to let someone else do your worrying . . ."



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P. P. CRET, Architect

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The dining car, although of the usual proportions, does not look like a long tunnel, but is divided into three parts of home-like proportions. The walls and ceiling of the central portion are covered with leather, in this case pigskin, in padded sections framed in bright chromium moldings, and the tables are set sideways, with Serpentine seats against the sidewalls as in a cafe. The end sections are veneered in wood (here it is Bubinga) which carries up on the sides of the ceiling.

QUESTIONNAIRE

COVERING CERTAIN INFORMATION NECESSARY FOR EMPLOYMENT FOR NATIONAL DEFENSE, OR ARCHITECTS REGISTERED TO PRACTICE ARCHITECTURE IN MINNESOTA AND IS ONLY COMPILED FOR THE GUIDANCE OF THOSE REQUESTING A LIST OF AVAILABLE MEN.

NOTE: This questionnaire has been prepared as directed by M. W. Del Gaudio, State Assoc. Director, A.I.A. The prime purpose of this questionnaire is to be able to present the Government agencies as well as private business a list of available men and their background.

NAME Member, Minn. Assn. of Architects ☐

ADDRESS Member (Minn.) (St. Paul) Chap. A. I. A. ☐

CITY Year of Arch. Reg.

- A. Do you wish employment only in Minnesota? ☐
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D. Are you willing to sign up for the duration of the war? ☐
E. Are you subject to active draft? (20-44) ☐
F. Are you willing to take employment other than architecture such as inspecting of materials, etc.? ☐

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PLACE NUMBER ONE IN SQUARE FOLLOWING THE QUESTION YOU CONSIDER
YOUR BEST QUALIFICATION, NUMBER TWO IN NEXT, ETC.**

- | | |
|---|---|
| G. Office administration <input type="checkbox"/> | K. Design mechanical <input type="checkbox"/> |
| H. Specification writing <input type="checkbox"/> | L. Building construction supervision <input type="checkbox"/> |
| I. Design architectural <input type="checkbox"/> | M. Building materials inspection <input type="checkbox"/> |
| J. Design structural <input type="checkbox"/> | N. General administration <input type="checkbox"/> |

THE FOLLOWING QUESTIONS APPLY TO FORMAL EDUCATION

NOTE: Many architects have a combination of formal and informal education; if so, mark in O. P. Q. R., as applicable.

- O. Are you a graduate of a high school? ☐
I attended high school years, months.
P. Are you a graduate of a technical school? ☐
I attended years, months.
Q. Are you a graduate of a university? ☐
I attended years, months.

THE FOLLOWING QUESTIONS APPLY TO INFORMAL EDUCATION

- R. Was applicant's education informal? ☐
(If so, give names and time of office training; add an additional sheet if required.)

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.....
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IN FRONT OF TYPE NUMBER.

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Blue Print Service Co.....	18
Canton Lumber Sales Co.....	20
Carney Co.....	9
Electric Blue Print Co.....	18
Hawkeye Portland Cement Co.....	20
Heatilator Co.	18
Jackson, Joel F.....	2
Lagerquist, Gust & Sons.....	18
H. G. Loftus.....	12
Minneapolis Blue Printing Co.....	18
B. F. Nelson Company.....	7
Northern States Power Co.....	19
Northwestern Improvement Co.....	14
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GAINS FROM WAR EFFORT

The tremendous economic readjustment and demand for man power brought about by the war effort are not without gains for the construction industry.

Recent indicated use of private architects for defense housing is one example.

Labor relations stabilization and an accelerated program of apprentice training are additional gains.

In the post-war readjustment program to come, it would appear that these gains will be of great help to the construction industry in the demands which will then be placed upon it, but can be fully utilized only by thorough organization of all branches of the industry.

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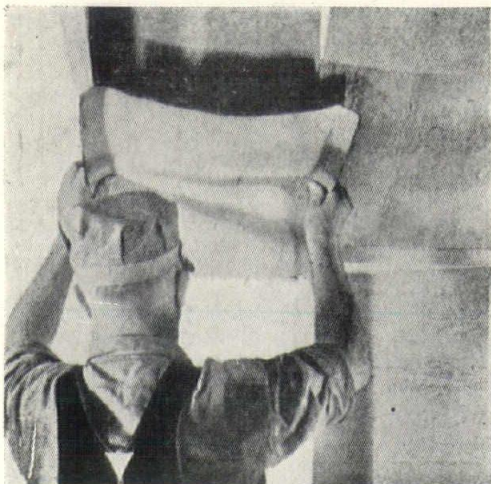
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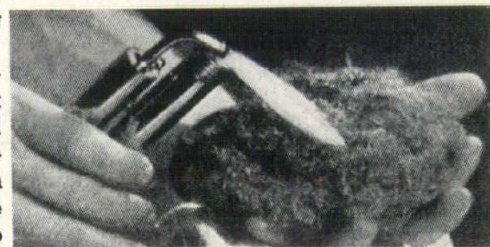
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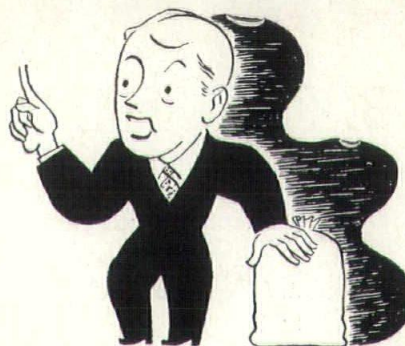
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